



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/633,764

08/04/2003

Yihua Chang

4022-000009

6497

27572 7590 10/26/2010
HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

MIGGINS, MICHAEL C

ART UNIT

PAPER NUMBER

1782

MAIL DATE

DELIVERY MODE

10/26/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YIHUA CHANG and RICHARD L. WATKINS

Appeal 2009-010112
Application 10/633,764
Technology Center 1700

Before ADRIENE LEPIANE HANLON, LINDA M. GAUDETTE,
and KAREN M. HASTINGS, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON REQUEST FOR REHEARING

Appellants, pursuant to 37 C.F.R. § 41.52, have submitted a timely Request for Rehearing dated August 5, 2010 (hereafter the “Request”), requesting rehearing of the original Decision in this appeal dated June 16, 2010 (hereafter “Dec.”).

We affirmed the Examiner’s rejection of all of the claims (claims 1 and 4-28, and 30-54) under 35 U.S.C. § 103(a) as unpatentable over the combined prior art of Bonk and Mueller.

ISSUE

Have Appellants established that the Board has erred in affirming the

§ 103 rejection by misapprehending the distinction between flexible and elastic (Request 2), or by applying an improper standard for teaching away (Request 4)?

ANALYSIS

As explained in our decision, while Appellants state that the flexible films of Mueller are not necessarily “resilient” as required by claim 1 (*id.*), Appellants agreed with the Examiner that Bonk does indeed describe a resilient membrane (Dec. 4). We also addressed Appellants’ main contention that one of ordinary skill “would expect the Mueller [clay laminar nano-filler] particles would make a film stiffer” which is undesirable for Bonk’s membrane (Dec. 3). We found that both references deal with flexible films wherein improved gas barrier properties, such as a low gas transmission rate, are desirable, and that Mueller discloses that the amount of clay material added should be in an amount sufficient to provide the *desired* gas barrier and/or mechanical properties (Dec. 4).

One of ordinary skill in the art would therefore have used an appropriate amount of clay material so as to not compromise the desired resilience of Bonk’s membrane. We concluded that

Accordingly, the Examiner’s position that one of ordinary skill in the art would have appreciated that the nano-sized clay filler particles of Mueller would have been useful in applications for membrane articles where a low gas transmission rate is desirable, as in Bonk, is reasonable. The use of the nano-sized clay particle filler, as taught in Mueller’s *flexible* films, in the *flexible resilient barrier film structure* of Bonk would have been nothing more than using a known filler in accordance with its known function for the predictable result of creating improved gas barrier properties of a flexible, resilient film. *See KSR*, 550 U.S. at 416 (“The combination of

familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”).

(Dec. 5; emphasis provided).

Accordingly, we do not agree with Appellants that we misapprehended the difference between flexibility and resilience.

We also do not agree that we erred by implying that teaching away requires some directive not to do what the inventors did (Request 4). It is well established that the degree of teaching away will depend on the facts. The disclosure of Bonk does not discourage one of ordinary skill in the art from employing the claimed nano-sized clay filler. *Cf. Para-Ordnance Manufacturing, Inc. v. SGS Importers International, Inc.*, 73 F.3d 1085, 1090 (Fed. Cir. 1995) (There is nothing in the reference that “teaches that [the claim limitation at issue] should not, or cannot” be so used.); *In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997) (“The statement in Zehender that ‘[i]n general, the thickness of the protective layer should not be less than about [100 Angstroms]’ falls far short of the kind of teaching that would discourage one of ordinary skill in the art from fabricating a protective layer of 100 Angstroms or less.”)

Even under the alleged more permissive “teaching away” standard of being “led in a direction divergent from the path that was taken by the applicant” urged by Appellants (Request 4), we are not convinced that we erred in determining that the applied prior art does not teach away. Notably, Appellants have not directed us to any persuasive evidence in their Appeal Brief which supports their assertions that “Mueller expressly teaches that elasticity is sacrificed” (Request 6), nor that the addition of modified clay

will always increase the stiffness of Mueller's film (Request 2; "The Mueller film is stiffer"). Moreover, even assuming *arguendo* that Appellants' contentions are correct, there is no evidence on this record that one of ordinary skill in the art would have considered any decrease in resiliency to outweigh the increase in gas permeability imparted by Mueller's fillers and thus, be led away from Appellants' claimed membrane. *See Geisler*, 116 F.3d at 1471. In this regard, we conclude that one of ordinary skill in the art would have used an appropriate amount of clay material so as to not compromise the desired resilience of Bonk's membrane. *See Spec.*, para. [0008] (disclosing that the addition of the claimed filler decreases the resilience of Appellants' membrane to some degree).

As stated in our decision:

Certainly, skill in the art is presumed, and a person of ordinary skill in the art would have reasonably expected that the known technique of using nano-size clay filler particles for improved gas barrier properties would have resulted in a satisfactory gas impermeable membrane. Mueller does not suggest that their clay particle filler should not or can not be used in gas barrier membranes, such as in Bonk; to the contrary, they teach that the nano-sized clay filler improves gas barrier properties without sacrificing mechanical properties. *In re Gurley*, 27 F.3d at 553; *see also Para-Ordnance Mfg., Inc.* 73 F.3d at 1090.

(Dec. 4, 5).

In sum, we have considered Appellants' arguments, but are not convinced that we erred in affirming the § 103 rejection, either by misapprehending the distinction between flexible and elastic (Request 2), or by applying an improper standard for teaching away (Request 4).

CONCLUSION

For the foregoing reasons, Appellants have not persuaded us that our decision was in error in any respect. We have considered Appellants' Request for Rehearing but find no points misapprehended or overlooked in our original Decision. Therefore, Appellants' Request for Rehearing is DENIED.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

DENIED

sld

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS MI 48303